

### AMENDMENT TO THE CLAIMS

This listing of claims will replace all prior versions of claims in the application.

#### Listing of Claims:

1. (Currently Amended) A method for the identification of a human subject having Alzheimer's disease responsive to treatment with a cholinomimetic drug, said method comprising determining the presence or absence of apoE allele *apoE4* in a biological sample ~~lead~~ of said subject, wherein the absence of the *apoE4* gene allele in the ~~a biological sample of said subject~~ identifies said subject as a subject whose Alzheimer's disease-related cognitive impairment is responsive to treatment with a cholinomimetic drug.
2. (Original) The method of claim 1, wherein said method further comprises administering to said subject having an absence of *apoE4* allele a therapeutically effective amount of a cholinomimetic drug.
3. (Original) The method of claim 2, wherein administration of the cholinomimetic drug improves cognitive performance.
4. (Currently Amended) A method for identifying a patient diagnosed with a cognitive impairment for participation in a clinical trial of a drug for the treatment of said cognitive impairment, said method comprising:

(a) identifying a patient as already diagnosed with said cognitive impairment or as being predisposed to acquire or to be at risk for said cognitive impairment; and

(b) determining the presence or absence of apoE allele *apoE4* in a biological sample load of said patient, wherein the absence of the *apoE4* gene allele in the biological sample indicates said patient is a desired candidate for participation in a clinical trial of a drug for the treatment of said cognitive impairment.

5. (Currently Amended) A method for identifying a patient diagnosed with Alzheimer's disease for participation in a clinical trial of a drug for the treatment of Alzheimer's disease, said method comprising:

(a) identifying a patient as already diagnosed with Alzheimer's disease or as being predisposed to acquire or to be at risk for Alzheimer's disease; and

(b) determining the presence or absence of apoE allele *apoE4* in a biological sample load of said patient, wherein the absence of the *apoE4* gene allele in the biological sample indicates said patient is a desired candidate for participation in a clinical trial of a drug for the treatment of Alzheimer's disease.

6-7 (Cancelled)

8. (Previously Presented) The method of claims 1, 2, 3, 4, or 5 wherein said drug is tacrine.

9. (Currently Amended) The method of claims 1, 4, or 5 wherein determining the presence or absence of the apoE allele *apoE4* in the biological sample load is by genotyping.